Health Alert: Anthrax Exposure in DC

March 15, 2005

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Health Alert
March 15, 2005

FROM: **JULIA M. ECKSTEIN**
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SUBJECT: **Anthrax Exposure in Dept of Defense Mail Facility**

ATTENTION: At this time, there have been no detections of anthrax in Missouri and this alert only applies to the DC, Maryland, and Virginia areas. If you have any questions regarding the handling of suspicious packages containing white powder, please refer to Health Advisory Powdery Substances dated 8.20.04 with the following link:

http://www.dhss.mo.gov/BT_Response/HAdPowderySubstances8-20-04.pdf

Also refer to the DHSS "Anthrax" website at http://www.dhss.mo.gov/BT_Response/Med/m_anthrax.htm for information on handling suspected anthrax cases.

Samples taken from a mail facility at the Pentagon at a Remote Delivery Facility (RDF) on March 10 tested positive for Bacillus anthracis. The Department of Defense (DOD) briefed all personnel who may have had contact with the mail at the Pentagon RDF. These employees are being provided with antibiotics as a prophylactic measure. Based on the route of mail reaching the Pentagon, CDC has made the following public health recommendations for USPS postal workers at the V Street Postal Facility in Washington DC where the DOD mail was processed prior to being sent to the Pentagon:

1) Active medical follow-up should be initiated; that is, interviews with possibly affected workers for evidence of symptoms and review of sick leave records.

2) Although risk is considered low, based on an abundance of caution a course of prophylactic antibiotics doxycycline or ciprofloxacin (both are equally effective) is recommended until tests determining possible exposure to B. anthracis at the V Street facility can be conducted.

CDC has also recommended DOD follow up immediately with other non-USPS commercial mail carriers that deliver to the DOD facility to share the information on:

1) Positive alarm signals.

2) Recommendations for USPS workers, so that those carriers can take steps as needed to follow up with their employees.

Extensive environmental sampling will be conducted in the Pentagon's RDF and the V Street Postal Facility to determine the extent of anthrax contamination.

Clinicians and public health agencies are encouraged to heighten their surveillance for typical symptoms and exposure history for B. anthracis. Clinicians should report suspected or confirmed anthrax cases immediately to your local or state department of health.

Anthrax causes and transmission

Anthrax is caused by exposure to B. anthracis an encapsulated, aerobic, gram-positive, spore-forming, rod-shaped bacterium. Depending on the route of infection, human anthrax can occur in three clinical forms: cutaneous, inhalational, and gastrointestinal. Direct skin contact with contaminated animal products can result in cutaneous anthrax. Inhalation of aerosolized spores, such as through industrial processing of contaminated wool, hair, or hides, can result in inhalational anthrax. Hemorrhagic meningitis can result from hematogenous spread of the organism following any form of the disease.

The incubation period for anthrax is generally <2 weeks. However, due to spore dormancy and slow clearance from the lungs, the incubation period for inhalational anthrax may be prolonged. This phenomenon of delayed onset of disease is not recognized to occur with cutaneous or gastrointestinal exposures.

Skin/cutaneous anthrax

Skin or cutaneous anthrax is the most common type of naturally-acquired infection. Infection begins as a pruritic papule or vesicle that enlarges and erodes (1-2 days) leaving a necrotic ulcer with subsequent formation of a central black eschar (Images at http://www.bt.cdc.gov/Agent/cutaneous.asp The lesion is usually painless with surrounding edema, hyperemia, and regional lymphadenopathy. Patients may have associated fever, malaise and headache. Historically, the case-fatality rate for cutaneous anthrax has been <1% with antibiotic treatment and 20% without antibiotic treatment. There are rare case reports of person-to-person transmission of cutaneous disease.

See http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5042a1.htm#tab2 for specific treatment of cutaneous anthrax.

Inhalational anthrax

Inhalational anthrax is rare but is the most lethal form of the disease. Disease may initially involve a prodrome of fever, chills, nonproductive cough, chest pain, headache, myalgias, and malaise. However, more distinctive clinical hallmarks include hemorrhagic mediastinal lymphadenitis, hemorrhagic pleural effusions, bacteremia and toxemia resulting in severe dyspnea, hypoxia and septic shock. Widened mediastinum is the classic finding on imaging of the chest, but may initially be subtle (Images at http://www.bt.cdc.gov/Agent/inhalational.asp and in the appendices). Case-fatality rates for inhalational anthrax are high, even with appropriate antibiotics, and supportive care. Following the bioterrorist attack in fall 2001, the case-fatality rate among patients with inhalational disease was 45% (5/11). Person-to person spread of inhalational anthrax has not been documented.

For case definitions, treatment guidelines, laboratory testing procedures, etc, see:

Anthrax Information for Health Care Providers
http://www.bt.cdc.gov/agent/anthrax/anthrax-hcp-factsheet.asp

For information on mail handler protection related to anthrax, see:
http://www.bt.cdc.gov/agent/anthrax/mail/index.asp